

Current Electricity and Circuits Key Terms

On-level Physics

The following are the terms you should be familiar with in order to properly complete this unit. You are expected to be able to define each as well as apply these terms in any situation during this and subsequent units of study.

voltage - The difference in electric potential between two points. Also known as potential difference.

electric current - the resulting flow of electric charge due to a potential difference.

resistance - The opposition of a material to the flow of electric current through it.

Ohm's law - The current in a circuit is directly proportional to the voltage in the circuit, and is inversely proportional to the resistance of the circuit.

circuit - The arrangement of a voltage source, conducting wires, and a resisting component that allows for the flow of electric charge.

voltmeter - A device connected across a circuit component to determine the potential difference it experiences.

ammeter - A device placed in line with the current in a circuit in order to measure the circuit's current.

cell (wet/dry) - A source of voltage allowing electric charge to flow. **Wet**... Most commonly results from the reaction of a metal with an acid; commonly used in automobile batteries. **Dry**... Most commonly results from the reaction of a metal with solid paste; are often called batteries like the ones you use in a flashlight...D-cell, AA-cell.

battery - A series of multiple cells (wet or dry) used to produce current in a circuit.

parallel circuit - An electric circuit in which devices are connected to the same two points of the circuit, so that any single device completes the circuit independently of the others.

series circuit - An electric circuit in which devices are arranged so that charge flows through each in turn. If one part of the circuit is removed or breaks, the entire circuit is broken.

direct current - Electric current in which the charge flows in one direction through the circuit.

alternating current - Electric current that repeatedly reverses direction, twice each cycle.

electrical power - The rate at which electrical energy is converted into another form such as light, heat, or mechanical energy.

schematic (circuit diagram) diagram – a diagram used to represent the components and their arrangement within an electric circuit. Specific symbols are used for each component and wires are represented by straight lines.